

Wastewater Disposal

Keeping Wastewater Local



MassDEP

One Winter Street

Boston, MA 02108

Wastewater Disposal

- Title 5 < 10,000 gallons per day (gpd)
- Groundwater Permitting > 10,000 gpd, 90 bedrooms



Statutes and Regulations

- MGL chapter 21, sec.26-53
- 314 CMR 5.00, Groundwater Permitting
- 314 CMR 6.00, Groundwater Quality Standards
- 310 CMR 15.000, Title 5
- 314 CMR 12.00, Operation & Maintenance



See MassDEP's website: www.mass.gov/dep/water/laws/regulati.htm

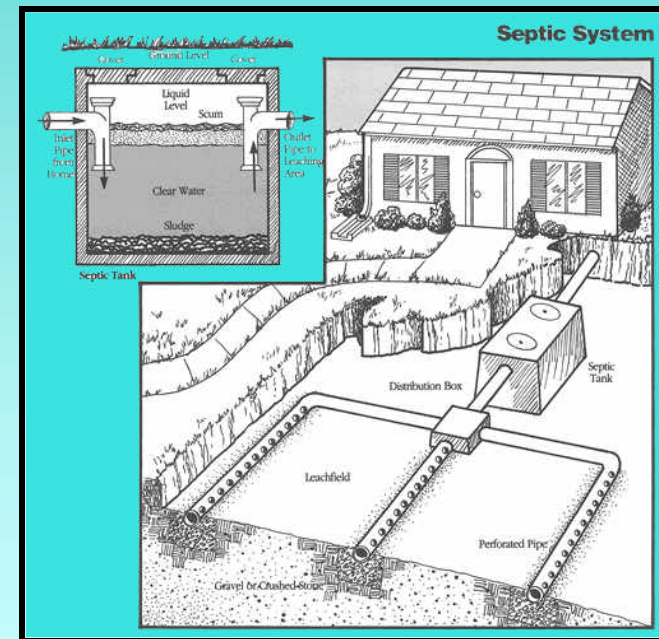
Title 5

310 CMR 15.000

*Siting and design of septic systems
< 10,000 gpd*

Basic Components

- Septic tank retains solids and floatables
 - Concrete, plastic, fiberglass
- Soil absorption system – further treatment of wastewater
 - Pipes, chambers, drip systems
- I/A treatments – provides a level of treatment for site specific use such as poor soils and nitrogen sensitive areas



Design Constraints

- Soil dependent – 4 ft. natural occurring with perc rate 60 mpi or less
- Separation to groundwater
- Nitrogen sensitive areas – 440 gpd/acre with Zone II and IWPA public water supply; on-site system & on-site well
- Set backs to surface water supplies and waterbodies
- No construction in Zone I's



Why use an I/A Treatment Unit

- Remedial – Allows for local approval of one of the following:
 - Reduction of groundwater separation
 - Reduction of 4 ft. natural occurring soil
 - Reduction of SAS up to 50%
- New Construction – Reduction of SAS; higher loading rate in nitrogen sensitive areas (550/acre, 660/acre)

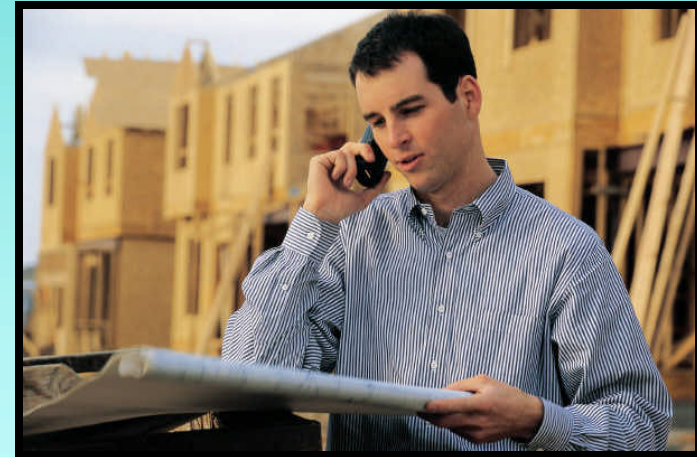
The Price

- Life-time maintenance contract for routine inspections, sampling, and response to emergencies
- Annual contract with a licensed service provider for the operation and maintenance identified by the manufacturer

More information: www.mass.gov/dep/water/wastewater/t5itprog.htm

Shared System – New Construction

- Supports cluster development
- Maintain a 50% open space
- System requires inspection every three years
- Could allow a denser development
- Users responsible for operation & maintenance construction



Groundwater Discharge Program

310 CMR 5.0 and 310 CMR 6.0

Groundwater Discharge Program

> 10,000 gpd

- Permits every 5 years
- High degree of treatment
- Limits the amount of pollutants discharged
- Requires monitoring of effluent and wells
- Requires submitting monitoring reports
- Operation & Maintenance requirements
- Staffing
- Ownership responsibilities
- Financial considerations



Design Considerations

- Technical design report
- Sensitive receptors – public water supplies, surface waters
- Hydrogeological study
 - Soil conditions
 - Loading rates
 - Groundwater mounding
- Individual site, off-site collection system to central wastewater facility
- Cost – Capital and Long-term

Helpful Policies & Guidelines

- Private sewage treatment facility for multiple-lot residential development
- Design, construction, operation & maintenance for small WWTFs with land disposal
- Interim guidelines on reclaimed water use

For more information: www.mass.gov/dep/water/laws/policies.htm#gwdisch